

Fig. 1
(Prior Art)

Swept volume
Constructed from the generated traces of the motion of a subset of
edges bounded by the subset of triangles
(Dashed: rejected / Solid: kept)

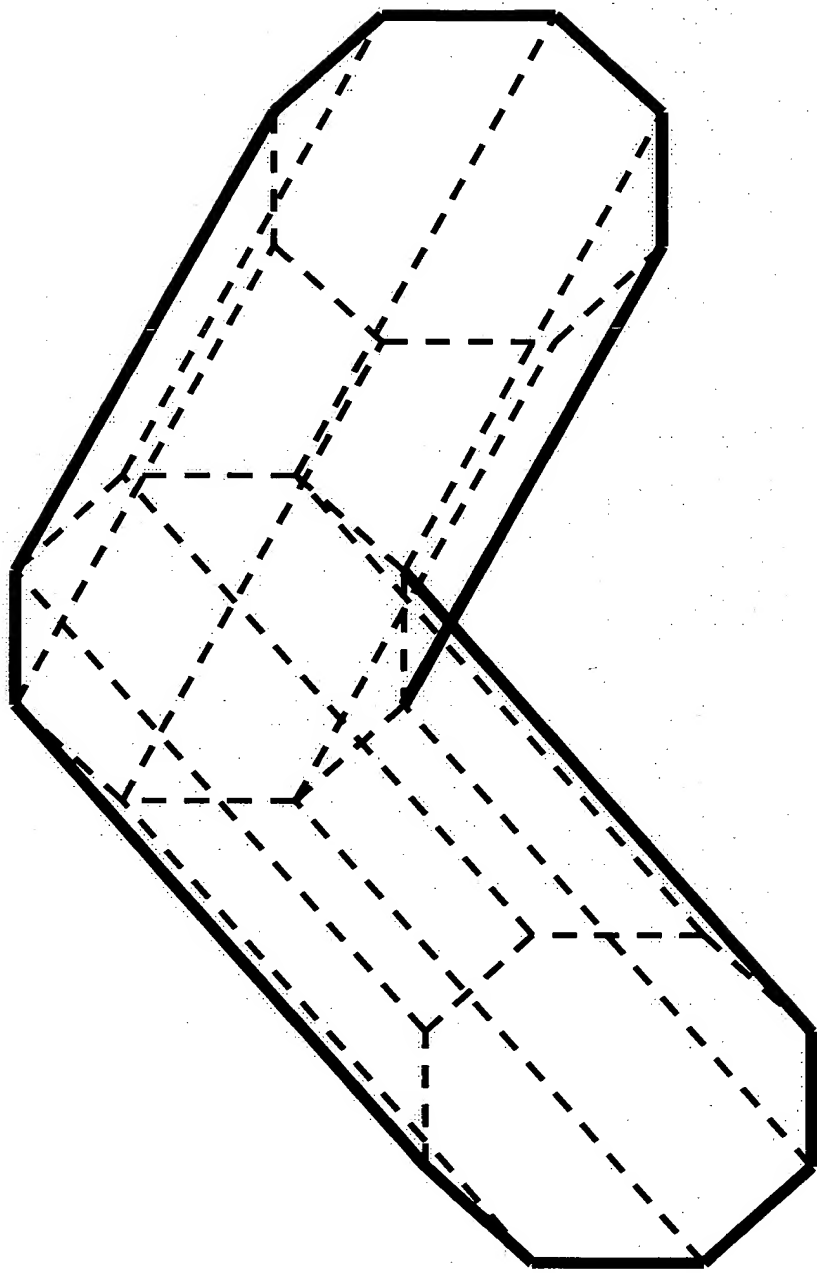


Fig. 2

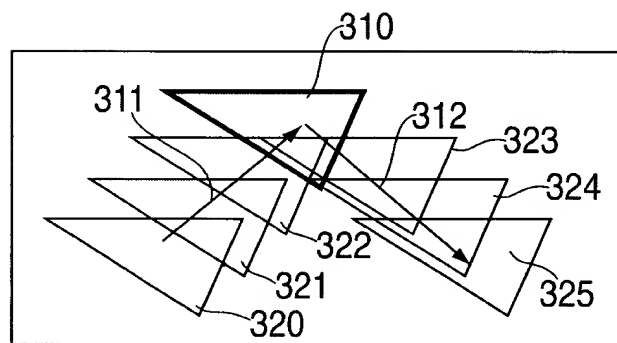


FIG. 3

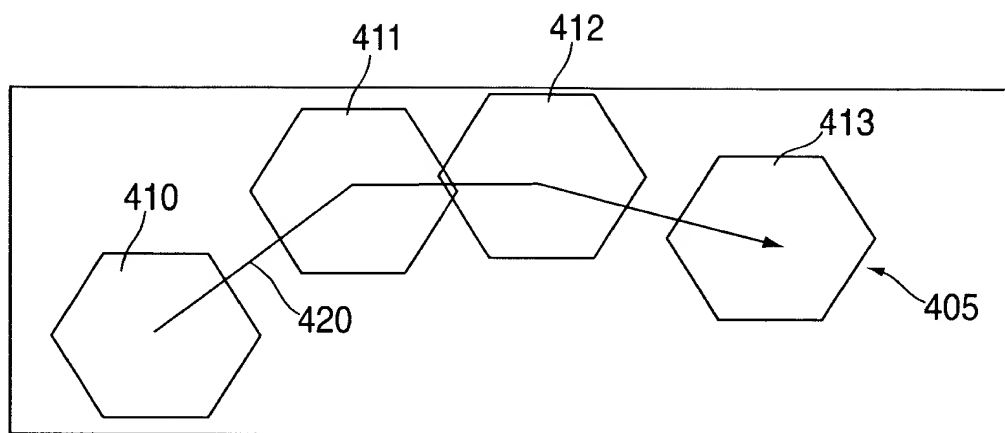


FIG. 4

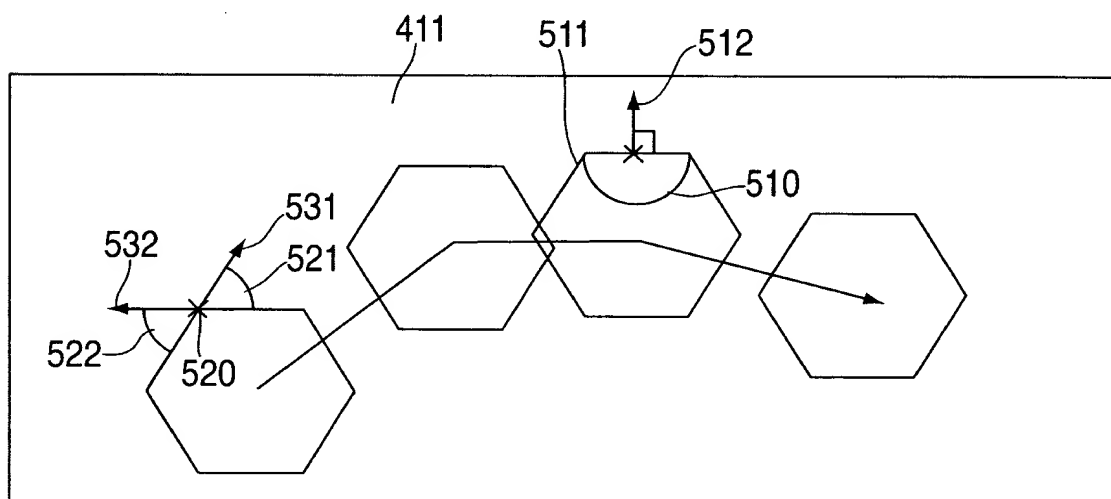


FIG. 5

First example, translation

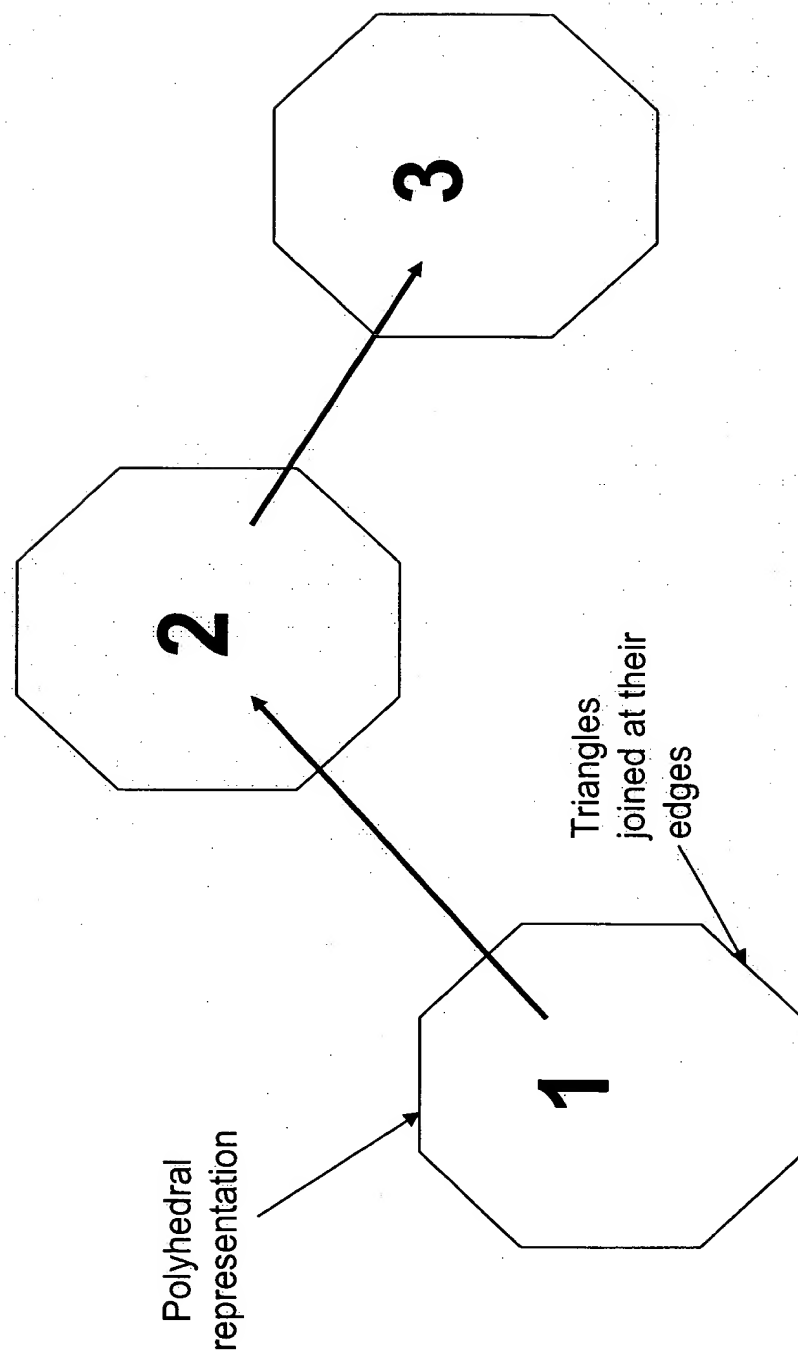


Fig. 6A

Selection of edges and their traces
in first zone

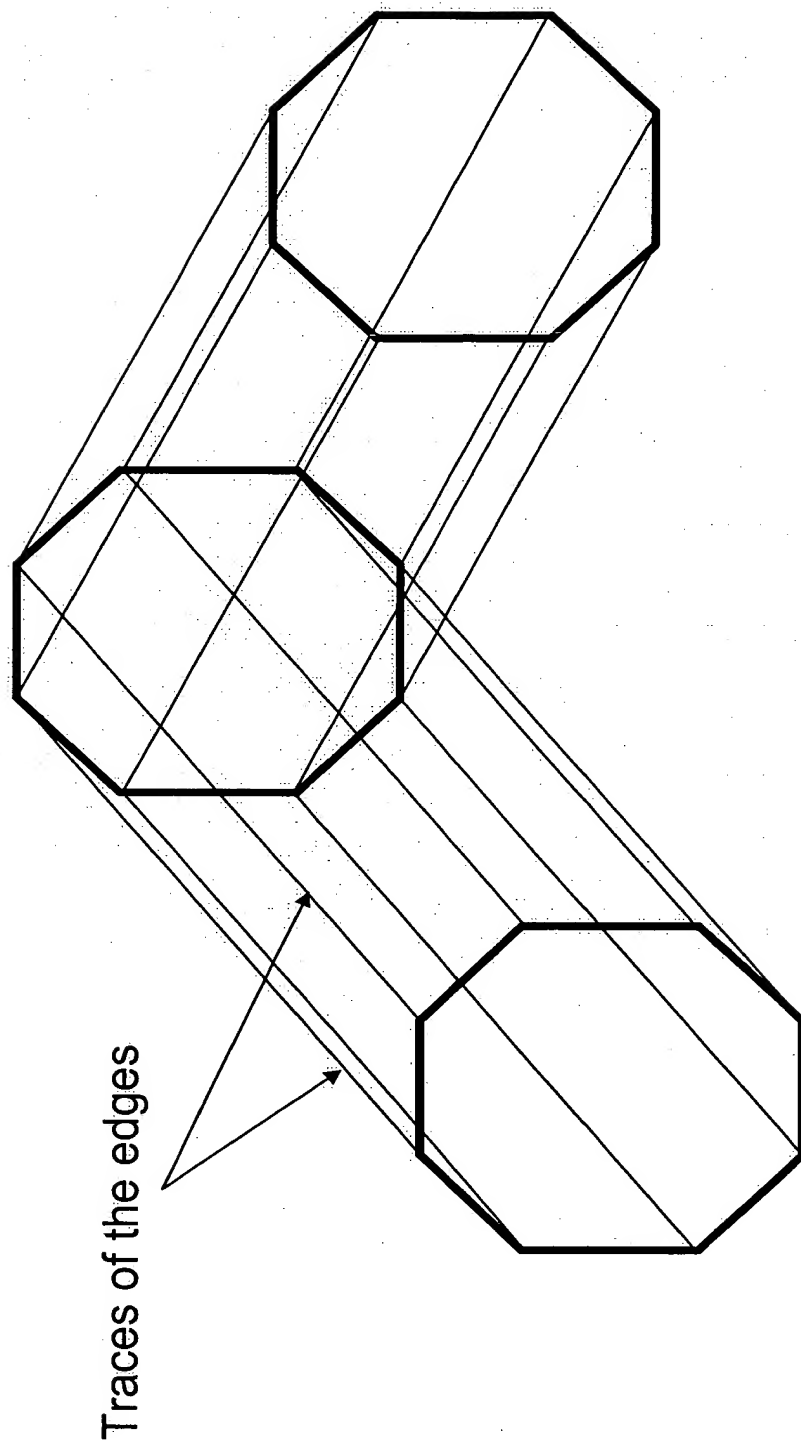
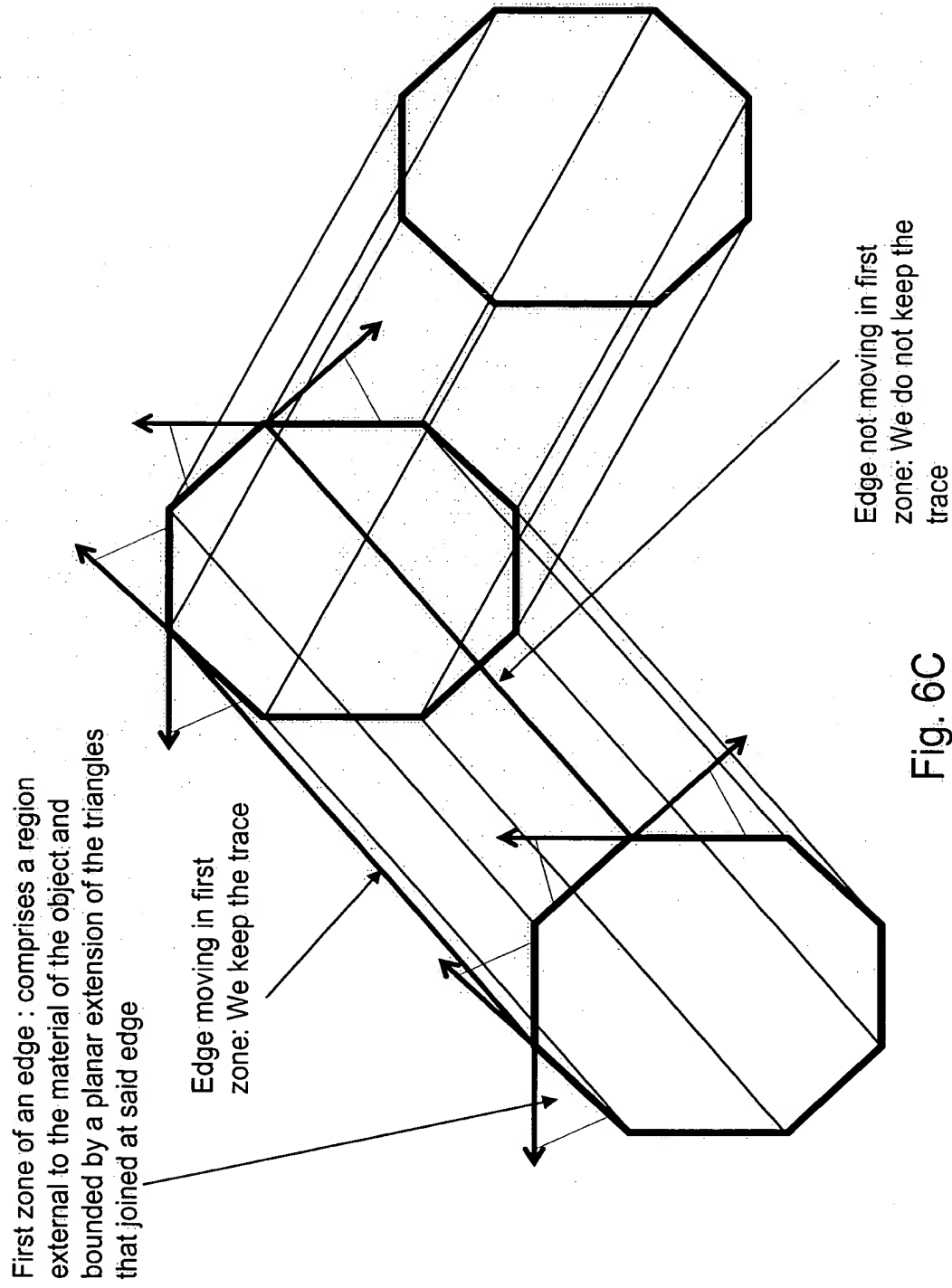
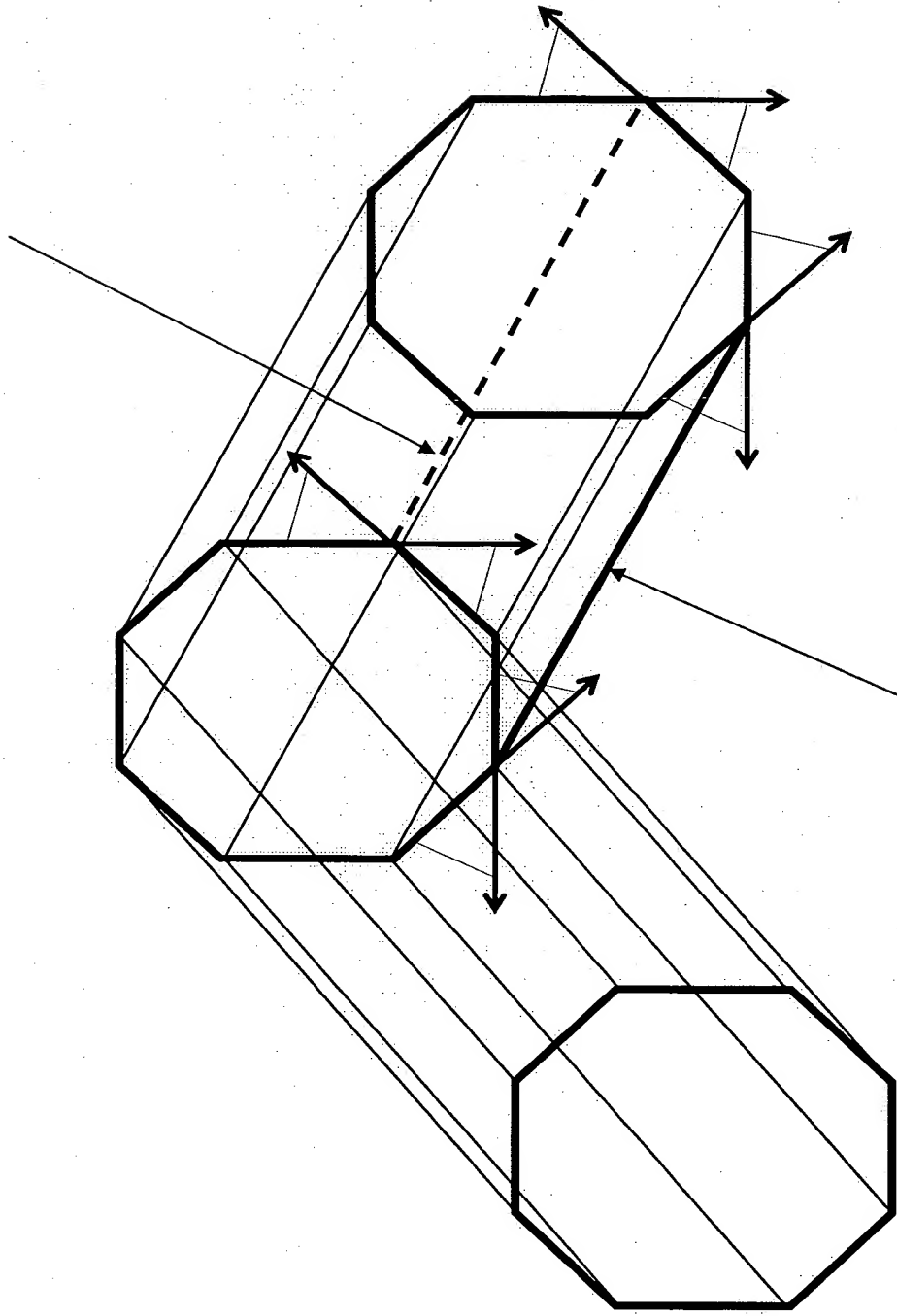


Fig. 6B



Edge not moving in first zone:
We do not keep the trace



Edge moving in first zone:
We keep the trace

Fig. 6D

Resulting set of kept traces
In solid, generated traces of the motion of the subset of edges

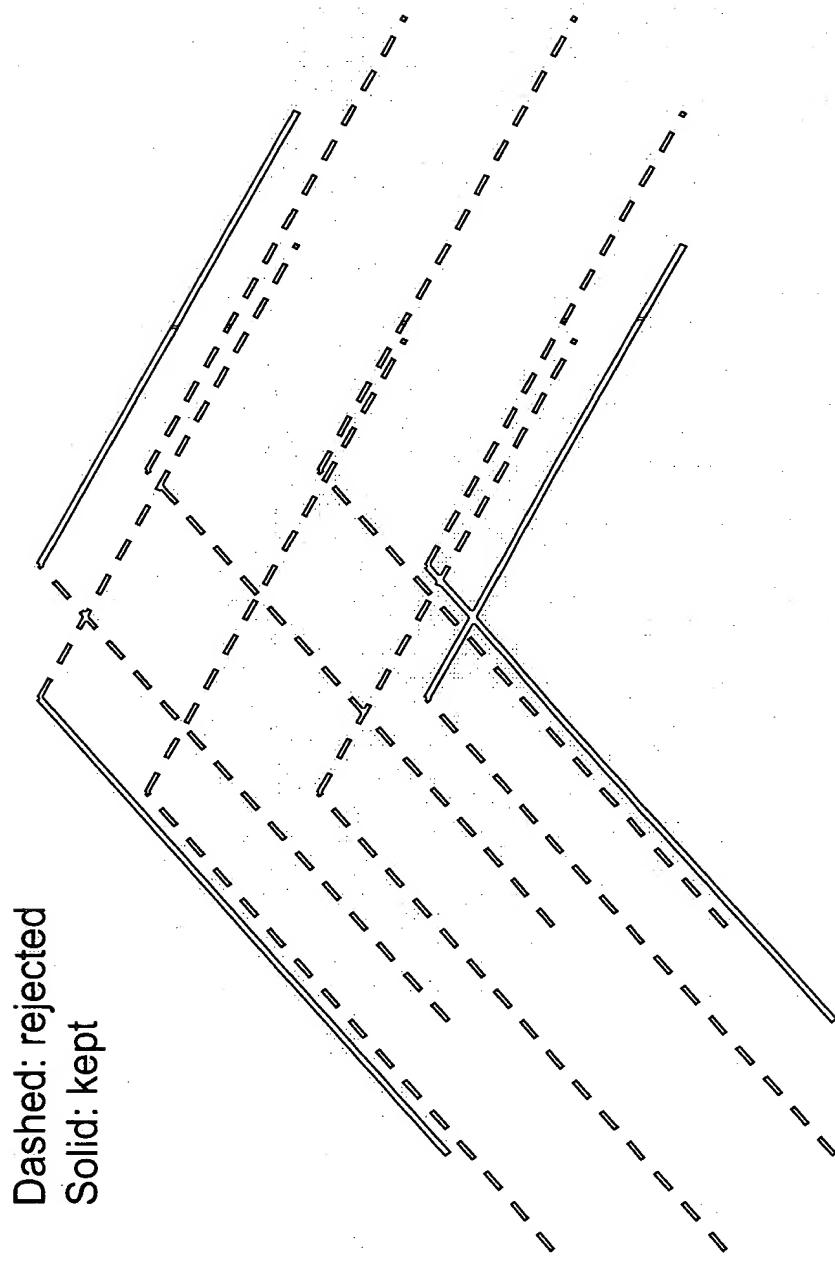


Fig. 6E

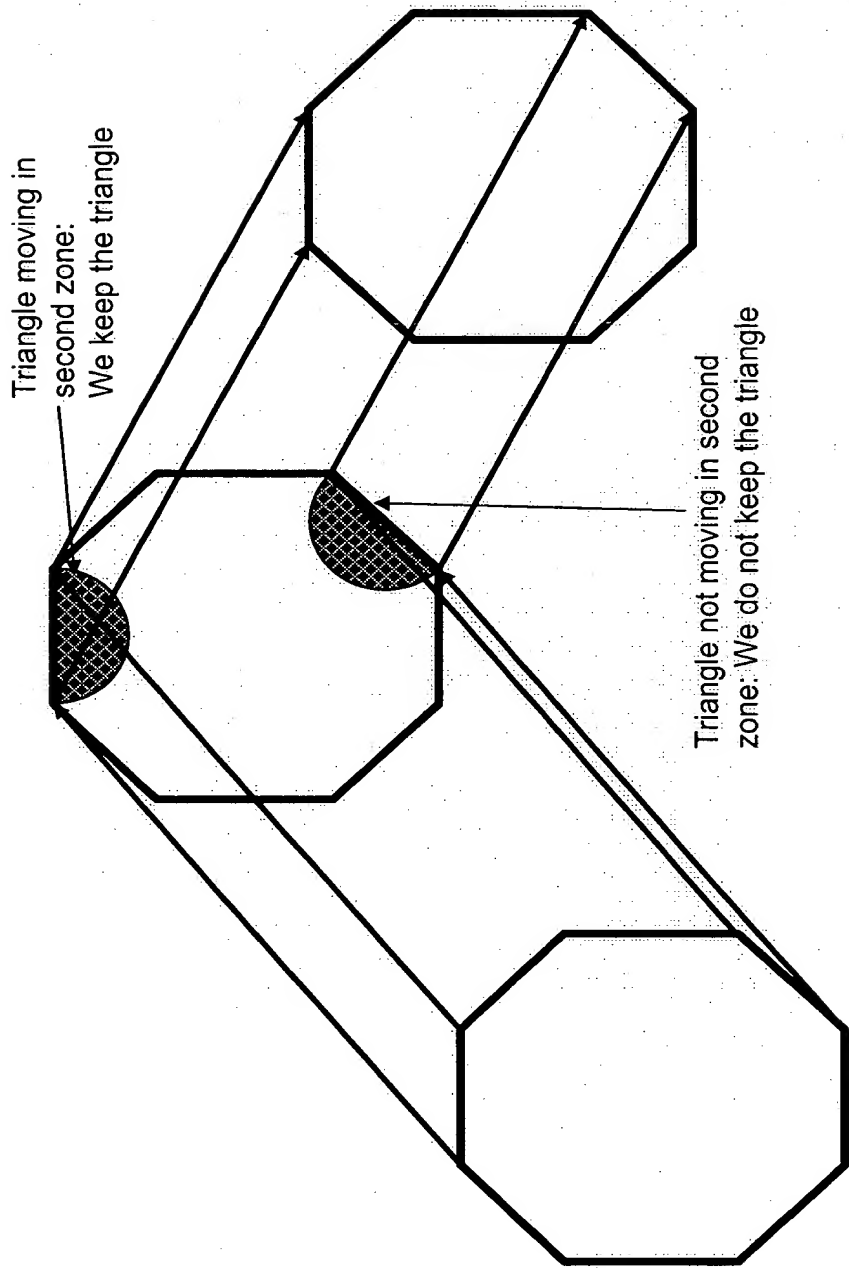


Fig. 6F

Selection of triangles moving in second zone

Second zone of a triangle

(half sphere comprising a flat face that is planar with said triangle and extending interior to the modeled object)

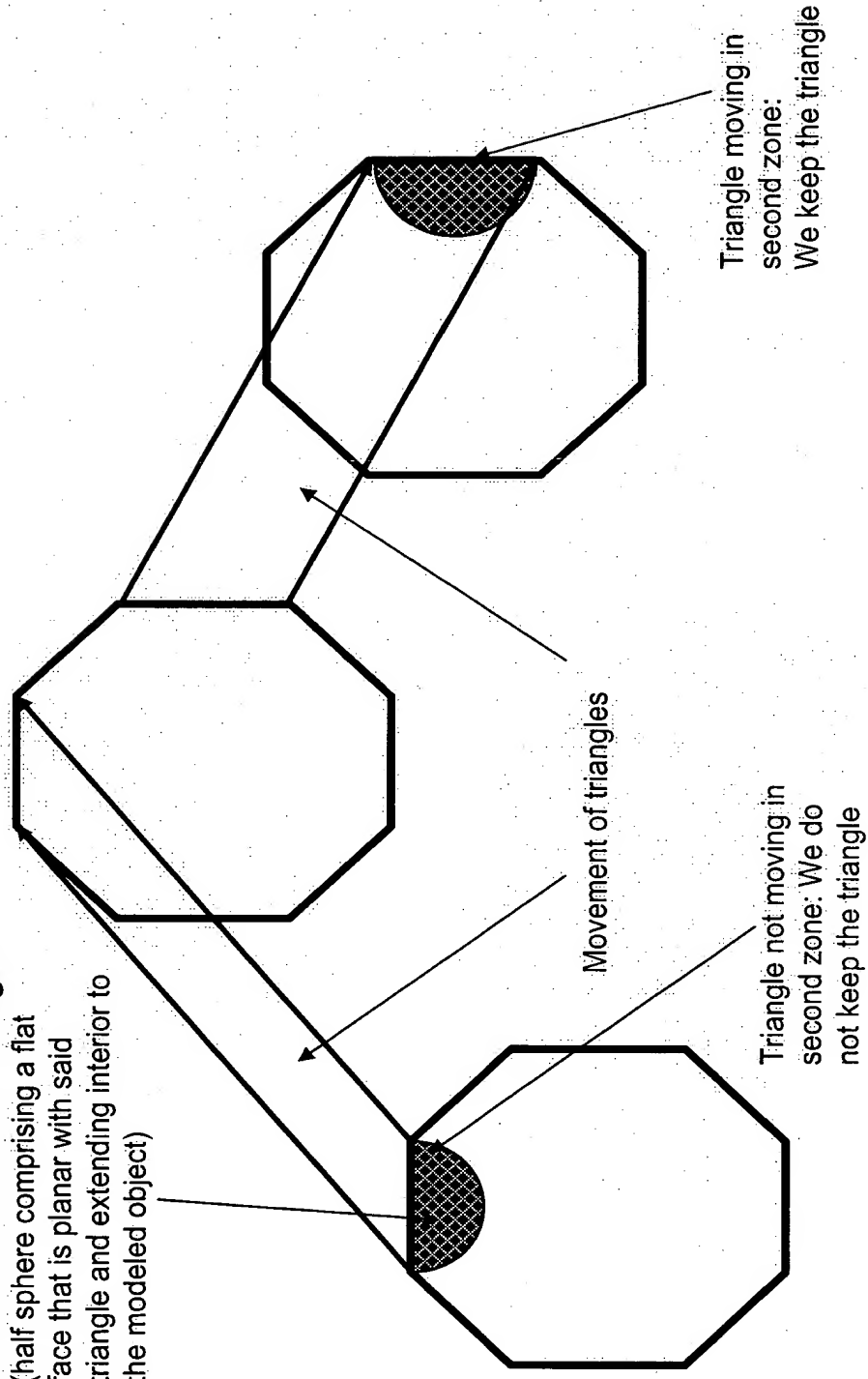


Fig. 6G

Resulting set of kept triangles:
Red: rejected
Solid: kept

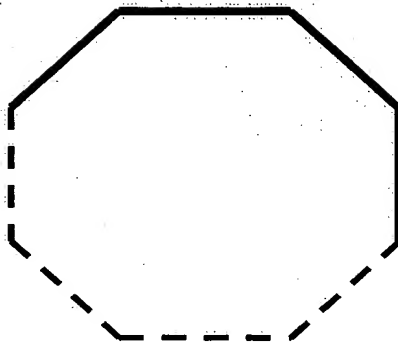
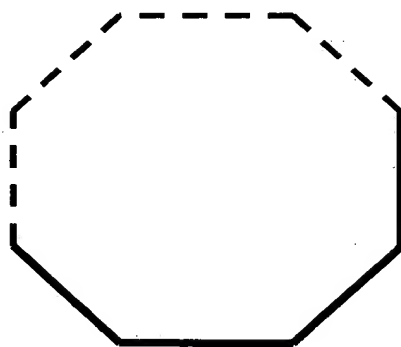
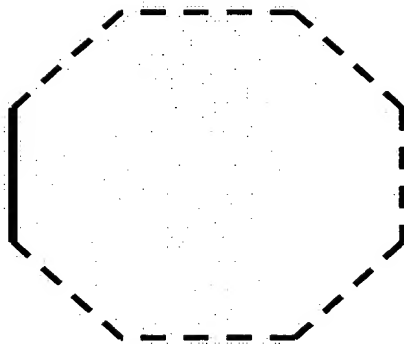


Fig. 6H

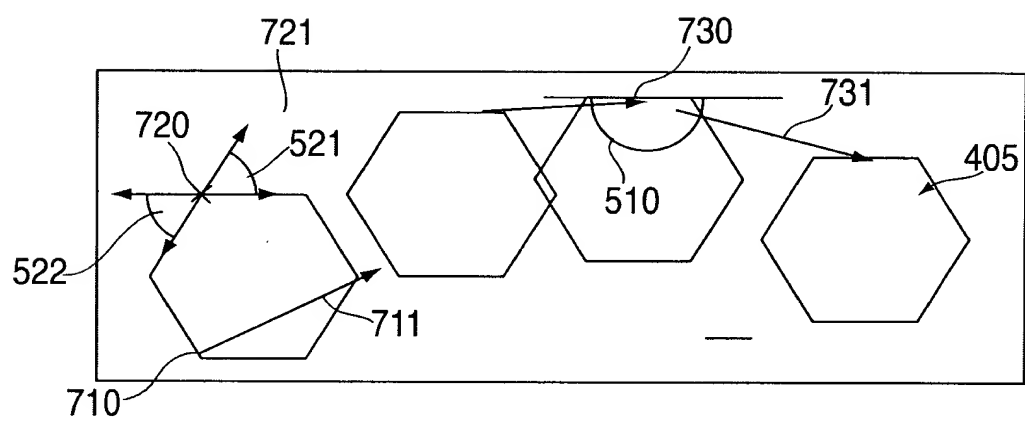


FIG. 7

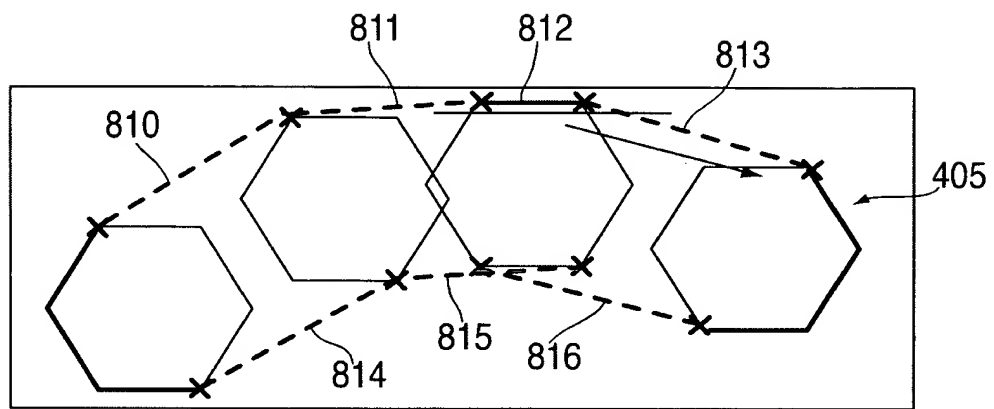


FIG. 8

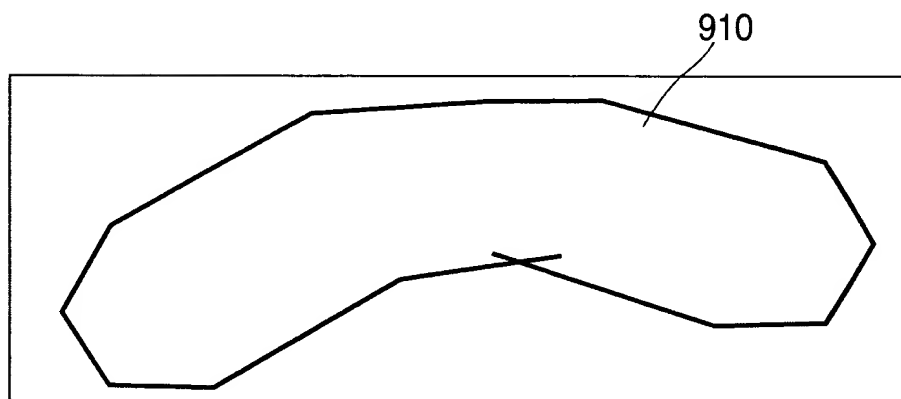


FIG. 9

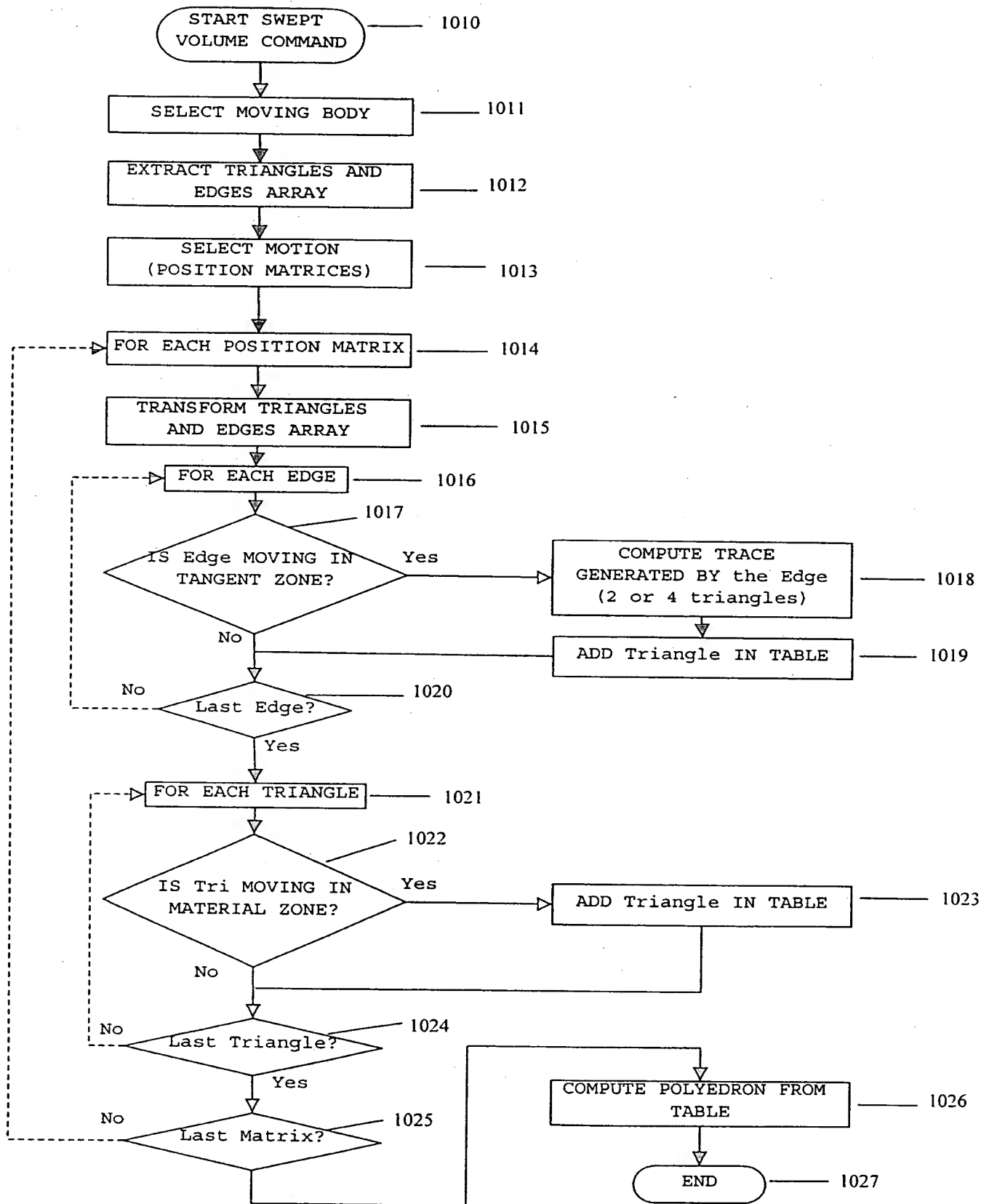


Fig. 10

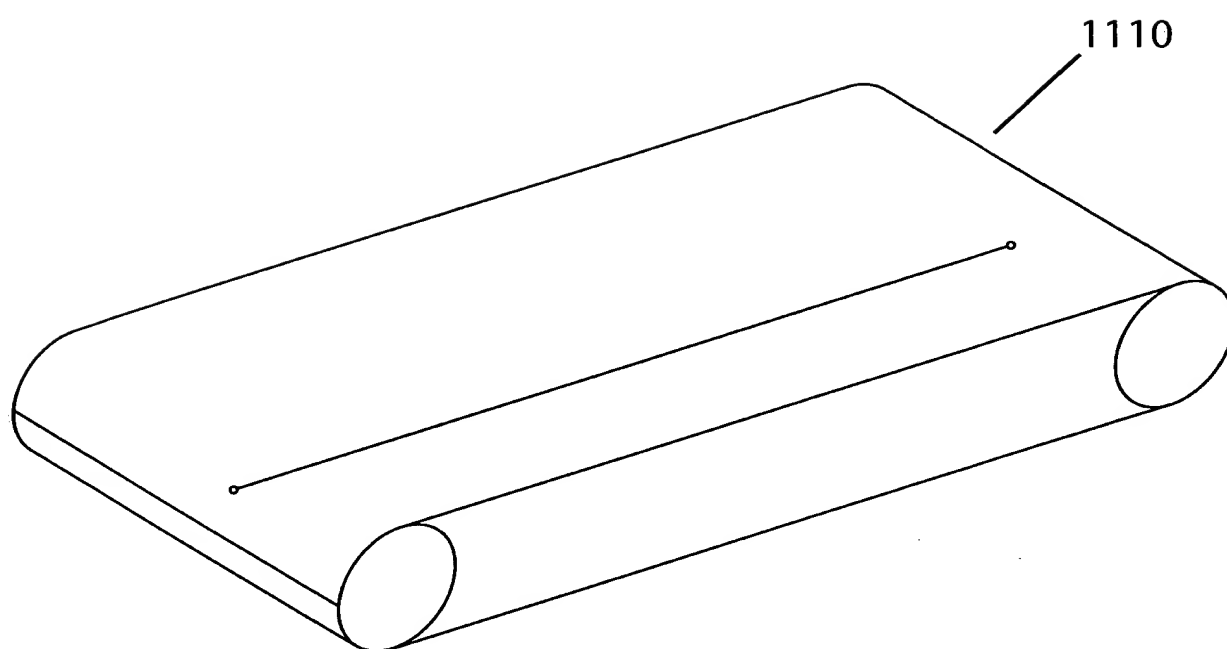


FIG. 11

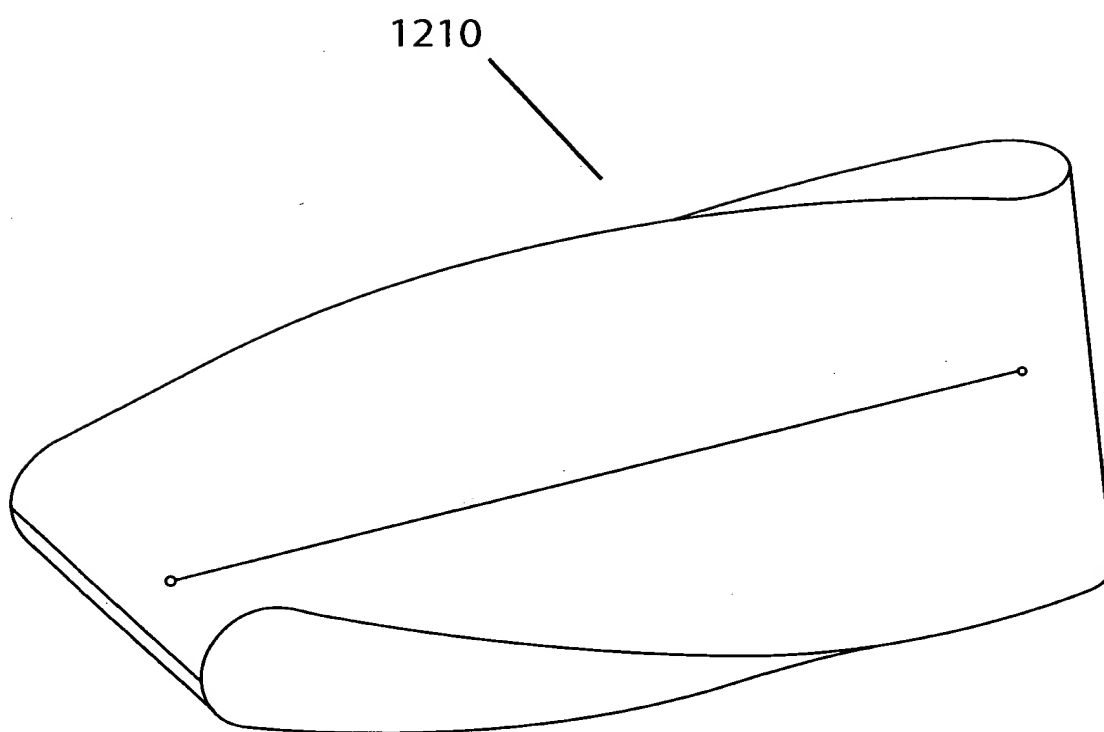


FIG. 12

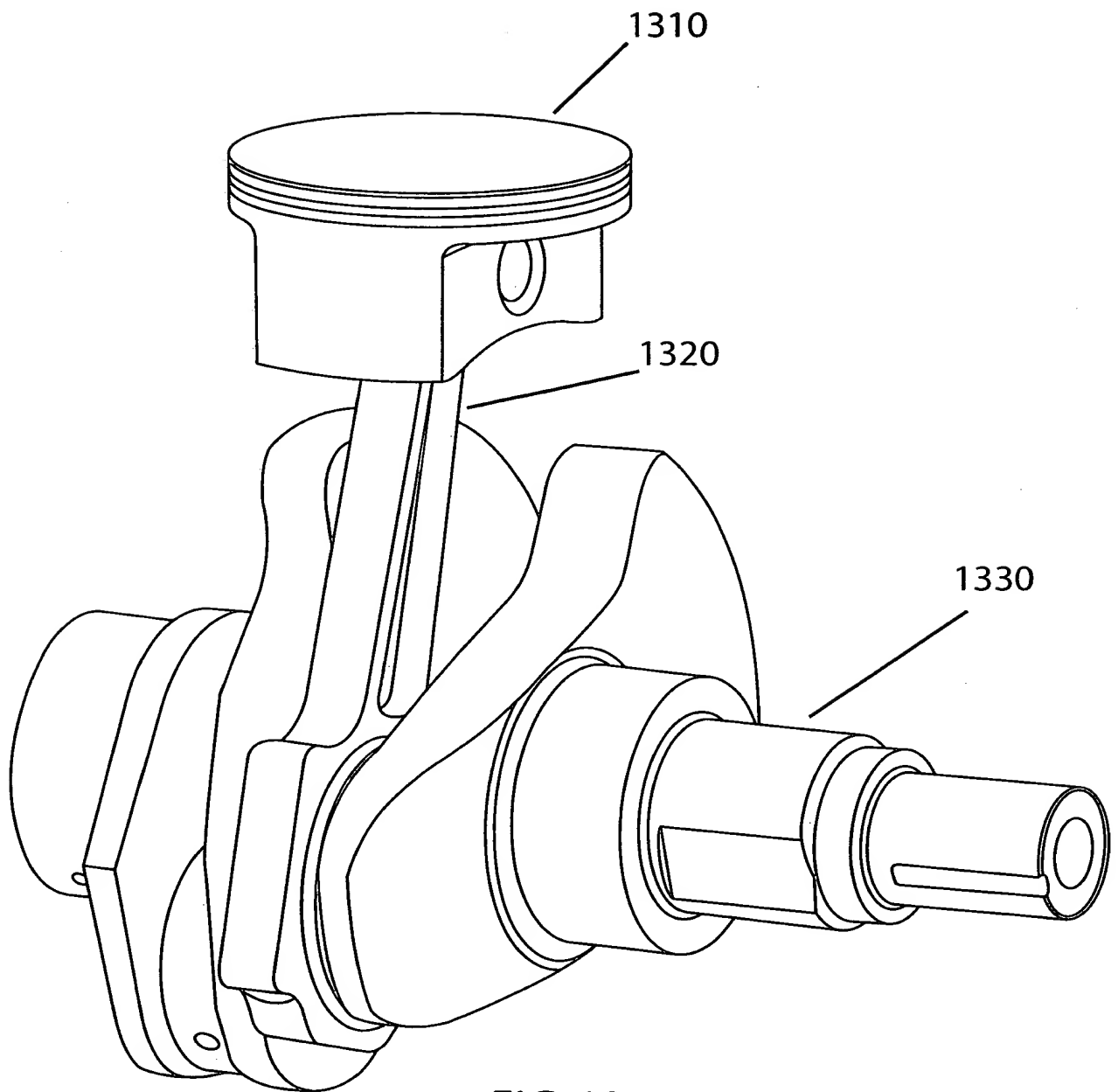


FIG. 13

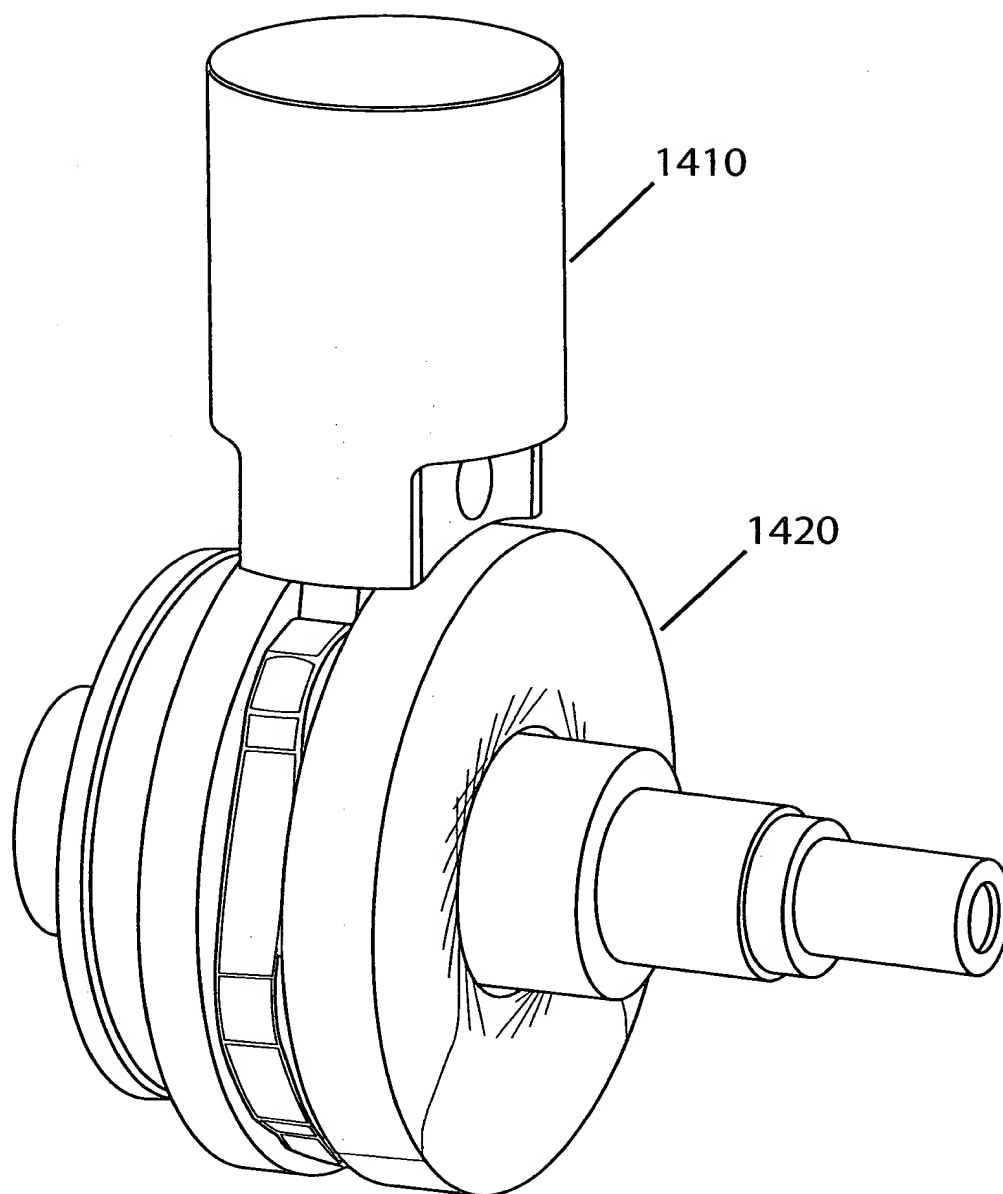


FIG. 14